

AmITX-BT-I

Mini-ITX Industrial Motherboard with 4th Gen Intel® Atom™ Processor E3800 Series SoC



Features

- Intel® Atom™ Processor E38xx System-on-Chip (single, dual or quad core)
- Dual SODIMM socket DDR3L-1333 memory (up to 16GB)
- 24-bit dual channel LVDS and HDMI
- OpenGL 3.0, OpenCL 1.2, DX11, H.264, MPEG2, MCV, VC-1, VP8 support



Specifications

Processor & System

CPU	Atom™ E3845 1.91 GHz 542/792 (Turbo) 10W (4C/1333) Atom™ E3825 1.33 GHz 533 (No Turbo) 6W (2C/1066) Atom™ E3815 1.46 GHz 400 (No Turbo) 5W (2C/1066) Celeron® N2930 1.83 GHz, 400/756 (Turbo) 7.5W (4C/1066) Celeron® J1900 2.00 GHz, 688/792 (Turbo) 10W (4C/1333)
	Supports single, dual or quad Out-of-Order Execution (OOE) processor cores, Intel® VT-x, Intel® SSE4.1 and SSE4.2, Intel® 64 architecture, IA 32-bit, PCLMULQDQ Instruction DRNG, Intel® Thermal Monitor (TM1 & TM2)
	Note: the availability of the features may vary between processor SKUs

Memory	Dual channel non-ECC 1333/1066 MHz DDR3L memory up to 16 GB in dual stacked SODIMM sockets
BIOS	AMI EFI with CMOS backup in 8MB SPI BIOS
SEMA Support	Supports: Voltage/Current monitoring, Power sequence debug support, AT/ATX mode control, Logistics and Forensic information, Flat Panel Control, General Purpose I2C, Failsafe BIOS (dual BIOS), Watchdog Timer and Fan Control
Debug Header	40-pin multipurpose flat cable connector. Use in combination with DB-40 debug module providing BIOS POST code LED, BMC access, SPI BIOS flashing, Power Testpoints, Debug LEDs

I/O Interfaces

Expansion Slots	1x PCIe x1 slot compliant with PCI Express Base 2.0 specification 1x Mini-PCIe full card support with USB and SIM card socket 1x mSATA full card support with USB
Serial ATA	2x SATA 3.0 Gbps port (one shared with mSATA)
USB	4x USB 3.0 on rear I/O 2x USB 2.0 on front panel header 2x USB 2.0 on standard header 1x USB 2.0 on Mini-PCIe and 1x USB 2.0 on mSATA slot
KB/MS	1x PS/2 internal header
Serial Ports	1x RS-232 on Rear I/O, 1x RS-232/422/485 on Rear I/O 4x RS-232/422/485 with 5V/12V support on internal headers
Digital IO	8x GPI, 8x GPO on internal feature connector

Onboard Storage

eMMC	Optional soldered eMMC with 8-64GB capacity
SD Card	Mini SD card slot on the bottom side

Audio

Audio Codec	Realtek® ALC886
Interfaces	Line-out, Mic-in on rear I/O 7.1 channel signals and S/PDIF output on internal header

Display

Graphics Core	Intel® Gen7 graphics core
VGA	Analog VGA up to 1920x1200 @ 60 Hz
HDMI	Supports HDMI 1.3a, up to 1920 x 1200 @ 60 Hz
LVDS	Single/Dual channel 24-bit up to 1920 x 1200 @ 60 Hz

Ethernet

Controller	2x Intel® i210 (MAC/PHY) Ethernet controller
Interface	PCIe x1 bus
Wake-on-LAN	Yes

Power

Standard Input	ATX = 12V±5% / 5Vsb ±5% from internal header AT = 12V±5% from internal header or external screw connector
Peripherals Output	Onboard headers for fan and SATA power

Mechanical and Environmental

Form Factor	Mini-ITX
Dimensions	170 mm x 170 mm (L x W)
Operating Temp.	Standard Operating Temperature: 0°C to 60°C Extreme Rugged Operating Temperature: -40°C + 85°C (optional, Atom™ E38xx series only)
Humidity	5-90% RH operating, non-condensing 5-95% RH storage
Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D
Relative Humidity	10% to 90%, non-condensing
HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

Ordering Information

Model Number	Description/Configuration
AmITX-BT-I-E3845	Mini-ITX with Intel® Atom™ E3845 at 1.91 GHz
AmITX-BT-I-E3825	Mini-ITX with Intel® Atom™ E3825 at 1.33 GHz
AmITX-BT-I-E3815	Mini-ITX with Intel® Atom™ E3815 at 1.46 GHz
AmITX-BT-I-N2930	Mini-ITX with Intel® Celeron™ N2930 at 1.83 GHz
AmITX-BT-I-J1900	Mini-ITX with Intel® Celeron™ J1900 at 2.00 GHz

Note: All specifications are subject to change without further notice.